

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- ~~BLACK OR VERY BLACK AND WHITE DARK PHOTOS~~
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



Figure 1A

SEQ ID NO:

6	mouse_E3 α I	MASEMEPEVQ AI D-RSILEC SAEIAGRWL QATDLNREVV QHLAHCVPKI	49
4	human_E3 α I	MASELEPEVQ AI D-RSILEC SAEIAGKWL QATDLTREVY QHLAHYVPKI	49
15	mouse_E3 α I	MADEEMDGAE RMDVSPEPPL APQRPAWWD QQVDFYTAFL HHLAQLVPEI	50
2	human_E3 α I	MADEEAGGTE RMEISAEELPQ TPQRLLASWWD QQVDFYTAFL HHLAQLVPEI	50
	Consensus	MA. E. . . . D. . . . L. . . . A. W. Q. . D. . . . HLA. VP. I	50
6	mouse_E3 α I	YCRGPNPFPQ KEDTLAQHIL LGPMEWI CA EDPALGFPKL EQANKPSHLC	99
4	human_E3 α I	YCRGPNPFPQ KEDMLAQHVL LGPMEWLCLG EDPAFGFPKL EQANKPSHLC	99
15	mouse_E3 α I	YFAEMDPDLE KQEESVQMSI LTPLEWLFG EDPDI CLEKL KHSG-AFQLC	99
2	human_E3 α I	YFAEMDPDIE KQEESVQMSI FTPLEWLFG EDPDI CLEKL KHSG-AFQLC	99
	Consensus	Y. . . . P. . . . K. . . . Q. . . . L. P. EWYL G EDP. . . . KL LC	100
6	mouse_E3 α II	GRVFKVGEPT YSCRDCAVDP TCVLCMECFL GSI HRDHRYR MTTSGGGFC	149
4	human_E3 α II	GRVFKVGEPT YSCRDCAVDP TCVLCMECFL GSI HRDHRYR MTTSGGGFC	149
15	mouse_E3 α I	GKVKFKSGETT YSCRDCAI DP TCVLCMDCFQ SSVHKNHRYK MHTSTGGGFC	149
2	human_E3 α I	GRVFFKSGETT YSCRDCAI DP TCVLCMDCFQ DSVHKNHRYK MHTSTGGGFC	149
	Consensus	GRVFK. GE. T YSCRDCAI. DP TCVLCM CF. . S. H. . HRV. M TS. GGGFC	150
6	mouse_E3 α II	DCGDTEAWKE GPYCQKHKLS SSEVVEEDP LVHLSEDVI A RTYNIFAI MF	199
4	human_E3 α II	DCGDTEAWKE GPYCQKHELN TSEIIEEEEDP LVHLSEDVI A RTYNIFAI TF	199
15	mouse_E3 α I	DCGDTEAWKT GPF CVDHEPG RAGTTKESLH - CPLNEEVIA QARRIFPSVI	198
2	human_E3 α I	DCGDTEAWKT GPF CVNHEPG RAGTI KENSR - CPLNEEVIV QARKIFPSVI	198
	Consensus	DCGDTEAWK. GP. C. HE. . . . E. . . . L. E. VI A IF. . . .	200



Figure 1B

6	mouse_E3 α II	RYAVDI LTWE KESELPEDLE VAEKSDTYYC MLFNDEVHTY EQVIYTLQKA	249
4	human_E3 α II	RYAVEI LTWE KESELPADLE MWEKSDTYYC MLFNDEVHTY EQVIYTLQKA	249
15	mouse_E3 α I	KYI VEMTI WE EEKELPPELQ I REKNERYYC VLFNDEHHSY DHVIYSLQRA	248
2	human_E3 α I	KYVVEMTI WE EEKELPPELQ I REKNERYYC VLFNDEHHSY DHVIYSLQRA	248
	Consensus	.Y. VE...WE .E. ELP..L. ..EK...YYC .LFNDE. H. Y ..VI Y. LQ. A	250
6	mouse_E3 α II	VNCTQKEAI G FATTVDRDGR RPVRYGDFQY CDQAKTVI VR NTSRQTK-PL	298
4	human_E3 α II	VNCTQKEAI G FATTVDRDGR RSVRYGDFQY CEQAKSVI VR NTSRQTK-PL	298
15	mouse_E3 α I	LDCELAEAQL HTTAIDKEGR RAVKAGVYAT CQEAKEDI KS HSENVSQHPL	298
2	human_E3 α I	LDCELAEAQL HTTAIDKEGR RAVKAGAYAA CQEAKEDI KS HSENVSQHPL	298
	Consensus	..C...EA...T..D..GR R. V..G...C..AK..I.....PL	300
6	mouse_E3 α II	KVQVMWHSVA AHQNFGLKAL SWLGSVI GYS DGLRRILCQV GLOEGPDGEN	348
4	human_E3 α II	KVQVMWHSIV AHQNFGLKLL SWLGSII GYS DGLRRILCQV GLOEGPDGEN	348
15	mouse_E3 α I	HVEVLHSVVM AHQKFALRLG SWMNKIMSYS SDFRQIFCQA CLVEEPGEN	348
2	human_E3 α I	HVEVLHSEIM AHQKFALRLG SWMNKIMSYS SDFRQIFCQA CLREEPDSEN	348
	Consensus	.V. V. HS... AHQ. F. L. L. SW...I...YS ...R. I. CQ. .L. E. PD. EN	350



Figure 1C

6	mouse_E3αII	SSLVDRMLN	DSKLWKGARS	VYHQLFMSL	LMDLKYYKLF	ALRFAKNYRQ	398
4	human_E3αII	SSLVDRMLS	DSKLWKGARS	VYHQLFMSL	LMDLKYYKLF	AVRFAKNYQQ	398
15	mouse_E3αI	PCLISRLMLW	DAKLYKGARK	I LHELIFSSF	FME MEYKKLF	AMEFVKYYKQ	398
2	human_E3αI	PCLISRLMLW	DAKLYKGARK	I LHELIFSSF	FME MEYKKLF	AMEFVKYYKQ	398
	Consensus	...L..RLM.	D.KL.KGAR	...H.L..SS.	M..YKKLF	A..F.K.Y.Q	400
6	mouse_E3αII	LQRDFMEDDH	ERAVSVTALS	VQFFTAPTLA	RMLTEENLM	TVI IKAFMDH	448
4	human_E3αII	LQRDFMEDDH	ERAVSVTALS	VQFFTAPTLA	RMLTEENLM	SII KTFMDH	448
15	mouse_E3αI	LQKEYISDDH	ERSISITALS	VQMLTVPTLA	RHLIEEQNVI	SVITETLLEV	448
2	human_E3αI	LQKEYISDDH	DRSISITALS	VQMF TVPTLA	RHLIEEQNVI	SVITETLLEV	448
	Consensus	LQ...DDH	ER..S.TALS	VQ.FT.PT LA	R.LI.E.N.	SVI..T..	450

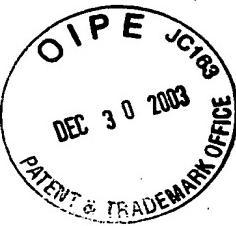


Figure 1D

SEQ ID NO:	mouse_E3αII	LRHRDAQGRF QFERYTALQA FKFRRVQSLI	LDLKYVLI SK PTEWSDELRQ	498
6	human_E3αII	LRHRDAQGRF QFERYTALQA FKFRRVQSLI	LDLKYVLI SK PTEWSDELRQ	498
4	mouse_E3αI	LPEYLDRNN-KFN-FQGYSQ DKLGRVYAVI	CDLKYLISK PVIWTERLRA	496
15	mouse_E3αI	LPEYLDRNN-KFN-FQGYSQ DKLGRVYAVI	CDLKYLISK PTI WTERLRM	496
2	human_E3αI	LPEYLDRNN-KFN-FQGYSQ DKLGRVYAVI	DLKY.LISK PT.W..LR.	500
	Consensus	L.....F.....K..RV...I	DLKY.LISK PT.W..LR.	500
6	mouse_E3αII	KFLQGFDNFL ELLKCMQGMD PI TRQVGQHI	EMEPWEAAF TLQMKLTHVI	548
4	human_E3αII	KFLEGFDNFL ELLKCMQGMD PI TRQVGQHI	EMEPWEAAF TLQMKLTHVI	548
15	mouse_E3αI	QFLEGFRSFL KILTCMQGM EIRRQVGQHI	EVDPDWAAI AIQMQLKNIL	546
2	human_E3αI	QFLEGFRSFL KILTCMQGM EIRRQVGQHI	EVDPDWAAI AIQMQLKNIL	546
	Consensus	FLEGFDNFL ..L.CMQGM .I.RQVGQHI E..P.WEAA..QM L....		550
6	mouse_E3αII	SMMQDWICALD EKVLEAYKK CLAVLTQCHG	GFTDGEQPI T LSI CGHSVET	598
4	human_E3αII	SMMQDWICASD EKVLEAYKK CLAVLMQCHG	GYTDGEQPI T LSI CGHSVET	598
15	mouse_E3αI	LMFQEWCACD EDLLLVAYKE CHKAVMRCST	NFMSSTKTV- VQLCGHSLET	595
2	human_E3αI	LMFQEWCACD EELLVAYKE CHKAVMRCST	SFISSSKTV- VQS CGHSLET	595
	Consensus	M.Q.WCA.D.E..L.AYK.C...M.C..F.....	...CGHS.ET	600



Figure 1E

6	mouse_E3 α II	I RYCVSQEKV SI HLPISRLL AGLHVLLSKS EVAYKFPELL PLSELSSPPM	648
4	human_E3 α II	I YCVSQEKV SI HLPVSRLL AGLHVLLSKS EVAYKFPELL PLSELSSPPM	648
15	mouse_E3 α I	KSYKVSEDLV SI HPLSRTL AGLHVRLSRL GAI SRLHEFV PFDSFQVEVL	645
2	human_E3 α I	KSYRVSEDLV SI HPLSRTL AGLHVRLSRL GAVSRHLHEFV SFEDFQVEVL	645
	Consensus	.. Y. VS. . . V SI HLP.SR.L AGLHV.LS. E. . P. L	650
6	mouse_E3 α II	I EHPLRCLVL CAQVHAGMMR RNGFSLVNQI YYYHNVKCRRE MF DDKDI VML	698
4	human_E3 α II	I EHPLRCLVL CAQVHAGMMR RNGFSLVNQI YYYHNVKCRRE MF DDKDVVM	698
15	mouse_E3 α I	VEYPLRCLVL VAQVVAEMMR RNGLSLISQV FYYQDVKCRE EMYDKDI I ML	695
2	human_E3 α I	VEYPLRCLVL VAQVVAEMMR RNGLSLISQV FYYQDVKCRE EMYDKDI I ML	695
	Consensus	.E. PLRCLVL .AQV. A. MMR RNG.SL.Q. YY. VKCR. EM DDKDI .ML	700
6	mouse_E3 α II	QTGVSMMDPN HFLM MLSRF ELYQLFSTPD YGKRFSSSEVT HKDVVQQNNT	748
4	human_E3 α II	QTGVSMMDPN HFLM MLSRF ELYQI FSTPD YGKRFSSSEIT HKDVVQQNNT	748
15	mouse_E3 α I	QI GASIMDPN KFLLLVLQRY EL--- TDA FNKTIST--K DQDLIKQYNT	738
2	human_E3 α I	QI GASLMDPN KFLLLVLQRY EL--- AEA FNKTIST--K DQDLIKQYNT	738
	Consensus	Q. G. S. MDPN .FL. . . L. R. EL. . . . T. . . . K. . S. . . . D. . . Q. NT	750



Figure 1F

6	mouse_E3 α II	LI EEMLYLI	ML VGERFNPG VGQVAATDEI	KREII HQLSI	KPMMAHSELVK	798
4	human_E3 α II	LI EEMLYLI	ML VGERFSPG VGQVNATDEI	KREII HQLSI	KPMMAHSELVK	798
15	mouse_E3 α I	LI EEMLQVL	YI VGERYVPG VGNVTREEVI	MREITHLLCI	EPMPHSAI AR	788
2	human_E3 α I	LI EEMLQVL	YI VGERYVPG VGNVTKEEVT	MREII HLLCI	EPMPHSAI AK	788
	Consensus	LI EEML...	YGER... PG VG. V....	REII H. L. I	PM HS... K	800
6	mouse_E3 α II	SLP EDENKET	GME SVI ESVA HFKKPGLTGR	GMYELKPECA	KEFNLYYHF	848
4	human_E3 α II	SLP EDENKET	GME SVI EAVA HFKKPGLTGR	GMYELKPECA	KEFNLYYHF	848
15	mouse_E3 α I	NLP ENNENNET	GLENVI NKVA TFKKPGVS GH	GYYELKDESL	KDFNMWYHY	838
2	human_E3 α I	NLP ENNENNET	GLENVI NKVA TFKKPGVS GH	GYYELKDESL	KDFNMWYHY	838
	Consensus	LPE. EN. ET	G. E. VI.. VA . FKKPG. G.	G. YELK. E..	K. FN. YYHF	850
6	mouse_E3 α II	SRAEQSKAEE	AQRKLKRENK EDTALPPP AL	PPFCPLFASL	VNI L QCDVML	898
4	human_E3 α II	SRAEQSKAEE	AQRKLKRQNR EDTALPPP VL	PPFCPLFASL	VNI L QSDVML	898
15	mouse_E3 α I	SKTQHSKAEH	MQKKRKRQEN KDEAL PPPP	PEFCPAFSKV	VNL L SC DVM	888
2	human_E3 α I	SKTQHSKAEH	MQKKRKRQEN KDEAL PPPP	PEFCPAFSKV	I NLL NCDI MM	888
	Consensus	S....SKAE.	. Q. K... Q. . D. ALPPP..	P. FCP. F...	VN. L. CDVM	900



Figure 1G

SEQ ID NO:	
6	mouse_E3 α II
4	human_E3 α II
15	mouse_E3 α I
2	human_E3 α I
	Consensus
6	mouse_E3 α II
4	human_E3 α II
15	mouse_E3 α R
2	human_E3 α R
	Consensus
6	mouse_E3 α II
4	human_E3 α I
15	mouse_E3 α I
2	human_E3 α I
	Consensus
6	mouse_E3 α II
4	human_E3 α I
15	mouse_E3 α I
2	human_E3 α I
	Consensus



Figure 1H

6	mouse_E3 α II	AQM δ EMQRHF	I DENKELFQQ	TLELDTSASA	TL- - DSSPPV	SDAALTALGP	1094
4	human_E3 α II	AQM δ EMQRHF	I DENKELFQQ	TLELDASTSA	VL- - DHSPVA	SDMTLTALGP	1094
15	mouse_E3 α I	AQM δ ALQKF	I ETHKLMYDN	TSEVTGKEDS	I MEESTSAV	SEASRI ALGP	1087
2	human_E3 α I	AQM δ ALQKF	I ETHKLMYDN	TSEMPGKEDS	I MEESTPAV	SDYSRI ALGP	1084
	Consensus	AQM δ .. Q .. F	I .. . K .. .	T. E.	S. P. V	S.D. . . ALGP	1100
6	mouse_E3 α II	AQTQVPEPRQ	FVTCI LCQE	QEVTVGSRAM	VLAAFVQRST	VLSKDRTKTI	1144
4	human_E3 α II	TQTQVPEQRQ	FVTCI LCQE	QEVKVESRAM	VLAAFVQRST	VLSKNRSKFI	1144
15	mouse_E3 α I	KRGPAVTEKE	VLTCI LCQE	QEVKLENNAM	VLSACVQKST	ALTQHRGKPV	1137
2	human_E3 α	KRGPSVTEKE	VLTCI LCQE	QEVKIENNAM	VLSACVQKST	ALTQHRGKPI	1134
	Consensus	. . . . . . .	TCI LCQE	QEVK. E. . AM	VL. A. VQ. ST	L. . . R. K. I	1150
6	mouse_E3 α II	AD- PEKYDPL	FMHPDLSCGT	HTGSGHVMH	AHCWQRYFDS	VQAKEQRQQ	1193
4	human_E3 α II	QD- PEKYDPL	FMHPDLSCGT	HTSSCGHIMH	AHCWQRYFDS	VQAKEQRQQ	1193
15	mouse_E3 α I	DHLGETLDPL	FMDPDLAHGT	YTGSGHVMH	AVCWQKYFEA	VQ- - LSSQQ	1184
2	human_E3 α I	ELSGEALDPL	FMDPDLAYGT	YTGSGHVMH	AVCWQKYFEA	VQ- - LSSQQ	1181
	Consensus	E. . DBI	EM. BDI	GT	TGS δ GHVMH	A CWD. YE	00



Figure 11

6	mouse_E3 α II	RRLIHTSYDV	ENGEFLCPLC	ECLSNTVI PL	L-LPPRSI LS	RRLN-FSDQP	1241
4	human_E3 α II	RRLIHTSYDV	ENGEFLCPLC	ECLSNTVI PL	L-LPPRN1 FN	NRLN-FSDQP	1241
15	mouse_E3 α I	RI HVDL-FDL	ESGEYLCPLC	KSLCNTVI PI	I PLQPQK1 NS	ENAEALAQLL	1233
2	human_E3 α I	RI HVDL-FDL	ESGEYLCPLC	KSLCNTVI PI	I PLQPQK1 NS	ENADALAQLL	1230
	Consensus	R. D.	E. GE. LCPLC	.. L. NTVI P.	.. L. P. . I. S	.. . . . . . . . . .	1250
6	mouse_E3 α II	DLAQWTRAVT	QQI KVVQML R	RKHNAA-DTS	SSEDTEAMNI	I PI. PEGFRPD	1290
4	human_E3 α II	NLTQWM RTI S	QQI KALQFLR	KEESTP-NNA	STKNSE NVDE	LQLPEGFRPD	1290
15	mouse_E3 α I	TLARW QTVL	ARI SGYN1 KH	AKGEAPAVPV	LFNQGMGDST	FEFHSI LSFG	1283
2	human_E3 α I	TLARW QTVL	ARI SGYN1 RH	AKGENP-I PI	FFNQGMGDST	LEFHHSI LSFG	1279
	Consensus	. LA. W. TV.	.. I . . . . .	. K. . . P. . . . .	.. . . . . . . . . .	.. . . . . . . . . .	1300
6	mouse_E3 α II	FYPRNPYSDS	I KEMLTTFGT	AAVKVGLKVH	PNEGDPRVPI	LCWGTCAVTI	1340
4	human_E3 α II	FRPKI PYSES	I KEMLTTFGT	ATYKVGLKVH	PNEEDPRVPI	MCWGSCAYTI	1340
15	mouse_E3 α I	VQSSVKYSNS	I KEMWI LFAT	T1 YRI GLKVP	PDELDPRVPM	MTWSTCAFTI	1333
2	human_E3 α I	VESSI KYNS	I KEMWI LFAT	T1 YRI GLKVP	PDERDPRVPM	LTWSTCAFTI	1329
	Consensus	.. . . . YS. S	I KEM. . F. T	.. Y. . GLKV.	P. E. DPRVP.	.. W. TCA. TI	1350



Figure 1J

SEQ ID NO:

6 mouse_E3 α I	QSIERILSDE	EKPVFGPLPC	RDDCLRSLT	RFAAAHWTVA	LLPVQGHFC	1390
4 human_E3 α I	QSIERILSDE	DKPLFGPLPC	RDDCLRSLT	RFAAAHWTVA	SVSVQGHFC	1390
15 mouse_E3 α I	QAIENLLGDE	GKPLFGALQN	RQHSGLKALM	QFAVAQRATC	PQVLHKHLA	1383
2 human_E3 α I	QAIENLLGDE	GKPLFGALQN	RQHNGLKALM	QFAVAQRITC	PQVLQKHLV	1379
Consensus	Q .IE.. L.DE	KPLFG .L..	R . . . L.. L.	.FA .A . . .	.... Q . H..	1400
6 mouse_E3 α I	KLFASLVPSD	SYEDLPCILD	IDMFHLLVGL	VLAFFPALQCQ	D---FSGSSL	1437
4 human_E3 α I	KLFASLVPSND	SHEELPCILD	IDMFHLLVGL	VLAFFPALQCQ	D---FSGISL	1437
15 mouse_E3 α I	RLLSVILPNL	QSENTPGLLS	VDLFHVLVGA	VLAFPSLYWD	DTVDLQPSPL	1433
2 human_E3 α I	RLLSVVLPNI	KSEDTPCLLS	IDLFHVLVGA	VLAFPSLYWD	DPVDLQPSSV	1429
Consensus	.L . . . PN.	.. E .. PC .L.	ID. FH. LVG .	VLAFF.L . . .	D SSL	1450
6 mouse_E3 α I	ATG--DLHIF	HLVTMAHIVQ	ILLTSCTEEN	---GMDQENP	TGEEELAILS	1482
4 human_E3 α I	GTG--DLHIF	HLVTMAHIIQ	ILLTSCTEEN	---GMDQENP	PCEEESAVLA	1482
15 mouse_E3 α I	SSSYNHLYLF	HLITMAHMLQ	ILLTTDTDSL	PGPPLAESEE	DSEEARCASA	1483
2 human_E3 α I	SSSYNHLYLF	HLITMAHMLQ	ILLTVDTGL-	--PLAQVQE	DSEEAHSASS	1475
Consensus	.....L . . F	HL . TMAH .. Q	ILLT .. T...	.... Q . . .	.. EE	1500



Figure 1K

6	mouse_E3 α II	LHKTLHQYTG	SALKEAPSGW	HLWRSVRRAI	MPFLKCSAL	FHYLNGVPAP	1532
4	human_E3 α II	LYKTLHQYTG	SALKEIPSGW	HLWRSVRAGI	MPFLKCSALF	FHYLNGVPSP	1532
15	mouse_E3 α I	FFVEVSQHTD	GLTGGCGAPGW	YLWLISLRNGI	TPYLRCAALL	FHYLLGVAPP	1533
2	human_E3 α I	FFAEISQYTS	GSIGCDIPGW	YLWWSLKNGI	TPYLRCAALF	FHYLLGVTPP	1525
	Consensus	.....QYT.	.....GW	.LW. S. R. GI	.P. L. C. ALF	FHYL. GV. . P	1550
6	mouse_E3 α II	PDLQV-SGTS	HFEHLCNYLS	LPTNLIHLFQ	ENSDIMNSLI	ESWCQNSEVK	1581
4	human_E3 α II	PDIQV-PGTS	HFEHLCSYLS	LPNNLICLFQ	ENSEIMNSLI	ESWCRNSEVK	1581
15	mouse_E3 α I	EELFANSAEG	EFSALCSYLS	LPTNLFLLFQ	EYWDTIRPLL	QRWCGDPALL	1583
2	human_E3 α I	EELHTNSAEG	EYSALCSYLS	LPTNLFLLFQ	EYWDTVRPLL	QRWCADPALL	1575
	Consensus	..L....S....	.F...LCSYLS	LPTNL..LFQ	E..D....L.	..WC.....	1600
6	mouse_E3 α II	RYLNGERGAI	SYPRGANKLI	DLPEDYSSLI	NQASNFSCKP	SGGDKSRAPT	1631
4	human_E3 α II	RYLEGERDAI	RYPRESNKLI	NLPEDYSSLI	NQASNFSCKP	SGGDKSRAPT	1631
15	mouse_E3 α I	KSLKQKSAVV	RYPRKRNSLI	ELPEDYSCLL	NQASHFRCPR	SADDERKHPV	1633
2	human_E3 α I	NCLKQKNTVV	RYPRKRNSLI	ELPDYDSCLL	NQASHFRCPR	SADDERKHPV	1625
	Consensus	..L.....	RYPR..N.LI	.LPEDYS.L.	NQAS.F.CP.	S..D....P.	1650



Figure 1L

6	mouse_E3 α II	LCLVCGSLLC	SQS YCCQAEI	E GEDVGACTA	HTYSCGSAG	I FL RVRECQV	1681
4	human_E3 α II	LCLVCGSLLC	SQS YCCQTEL	E GEDVGACTA	HTYSCGSVG	I FL RVRECQV	1681
15	mouse_E3 α I	LCLFCGAI LC	SQNI CCQEIV	NGEEVGACVF	HAL HCGAGVC	I FLKI RECRV	1683
2	human_E3 α I	LCLFCGAI LC	SQNI CCQEIV	NGEEVGACIF	HAL HCGAGVC	I FLKI RECRV	1675
	Consensus	LCL CG. . LC SQ. . CCQ. .	. GE. VGAC. .	H. . CG. GV.	I FL. . REC. V	1700	
6	mouse_E3 α II	LFLAGKTKG C	FYSPPYLDDY	GETDQGLRRG	NPLHL CQERF	RKI QKL WQQH	1731
4	human_E3 α II	LFLAGKTKG C	FYSPPYLDDY	GETDQGLRRG	NPLHL CKERF	KKI QKL WHQH	1731
15	mouse_E3 α I	VLVEGKARGC	AYPAPYLDEY	GETDPGLKRG	NPLHL SRERY	RKL HL VWQQH	1733
2	human_E3 α I	VLVEGKARGC	AYPAPYLDEY	GETDPGLKRG	NPLHL SRERY	RKL HL VWQQH	1725
	Consensus	. . . GK. . GC	. Y. . PYLD. Y	GETD. GL. RG	NPLHL. . ER.	RK. . . WQQH	1750
6	mouse_E3 α II	SI TEEI GHAQ	EANQTLVGI D	WQHL		1755	
4	human_E3 α II	SVTEEI GHAQ	EANQTLVGI D	WQHL		1755	
15	mouse_E3 α I	CIEE I ARSQ	ETNQMLFGFN	WQL L		1757	
2	human_E3 α I	CIEE I ARSQ	ETNQMLFGFN	WQL L		1749	
	Consensus	. I. EEI. . . Q	E. NQ. L. G. .	WQ. L		1774	



FIG. 2

Tth Expression Profile of huE3 α -II in Human Tissues

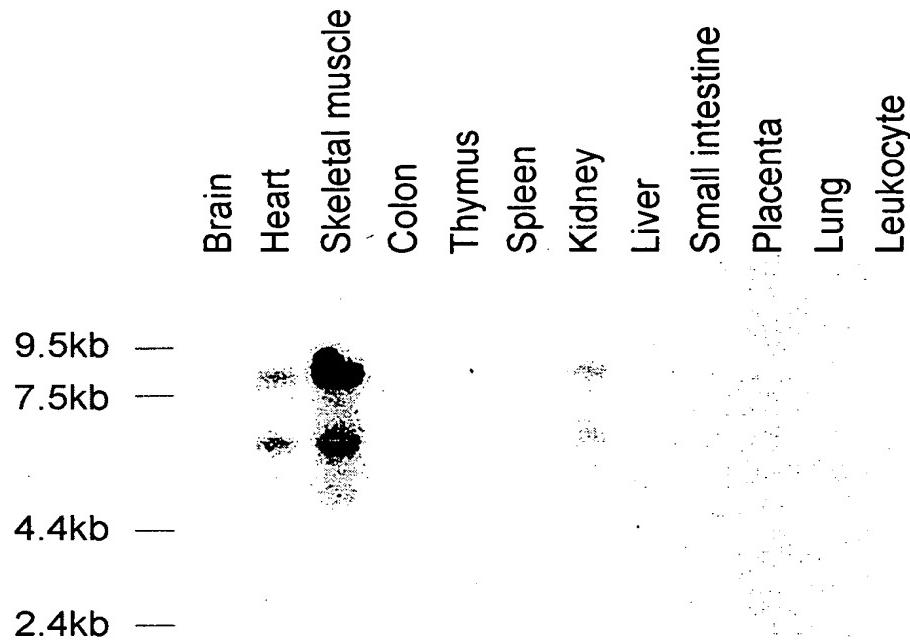




FIG. 3

Tth Expression Profile of huE3 α -I in Human Tissues

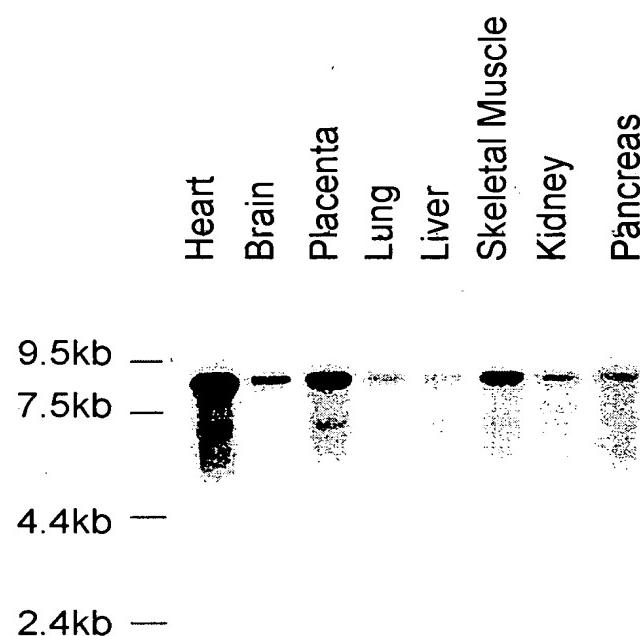
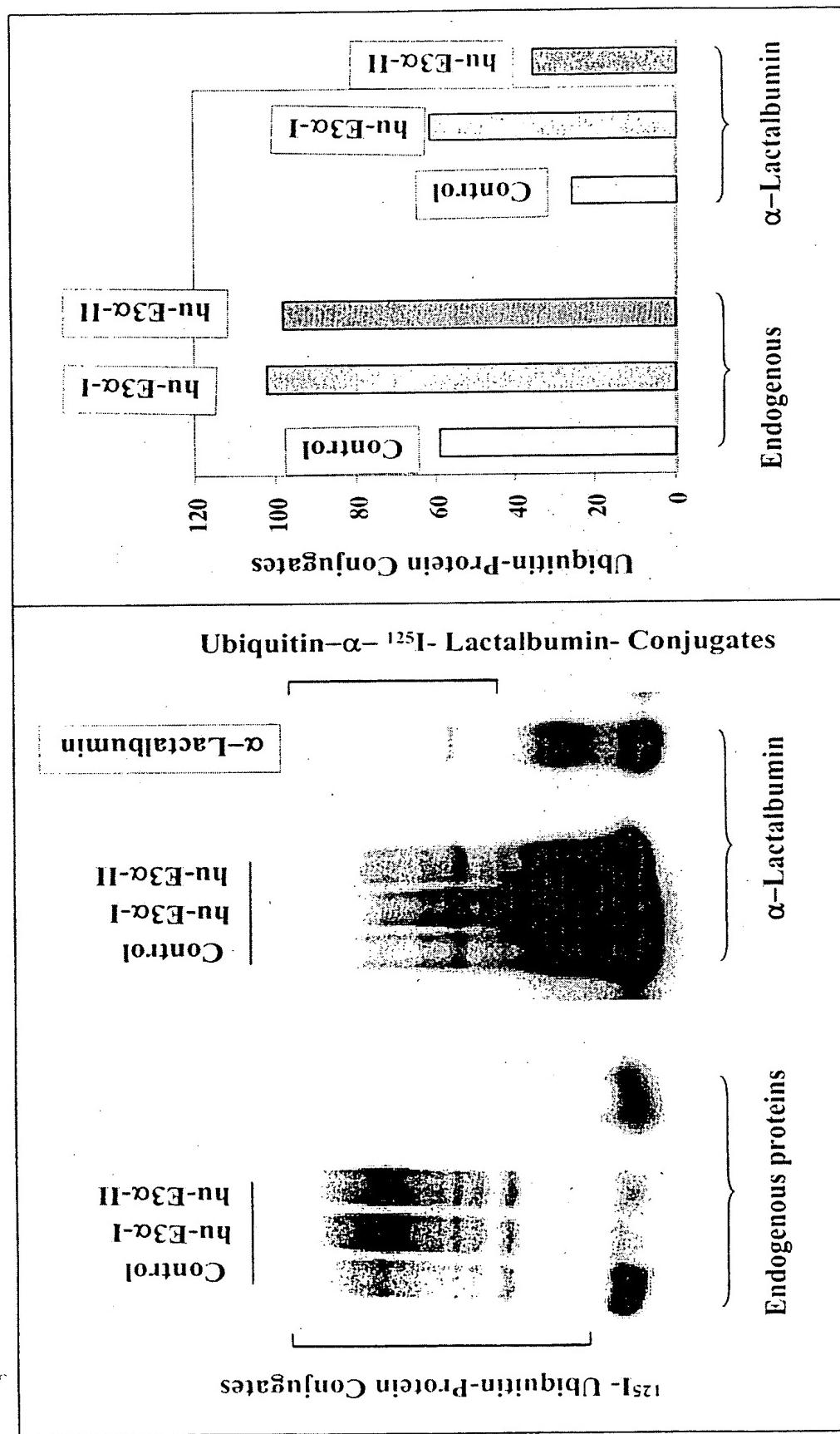




Figure 4
Ubiquitination of Endogenous Proteins



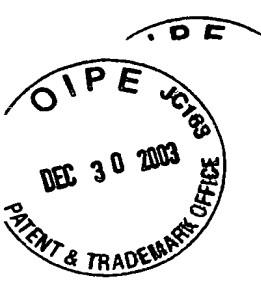


Figure 5

**Transfection of Human E3a-I or E3a-II cDNA Stimulates
Ubiquitin Conjugation in Cultured Muscle Cell Lines**

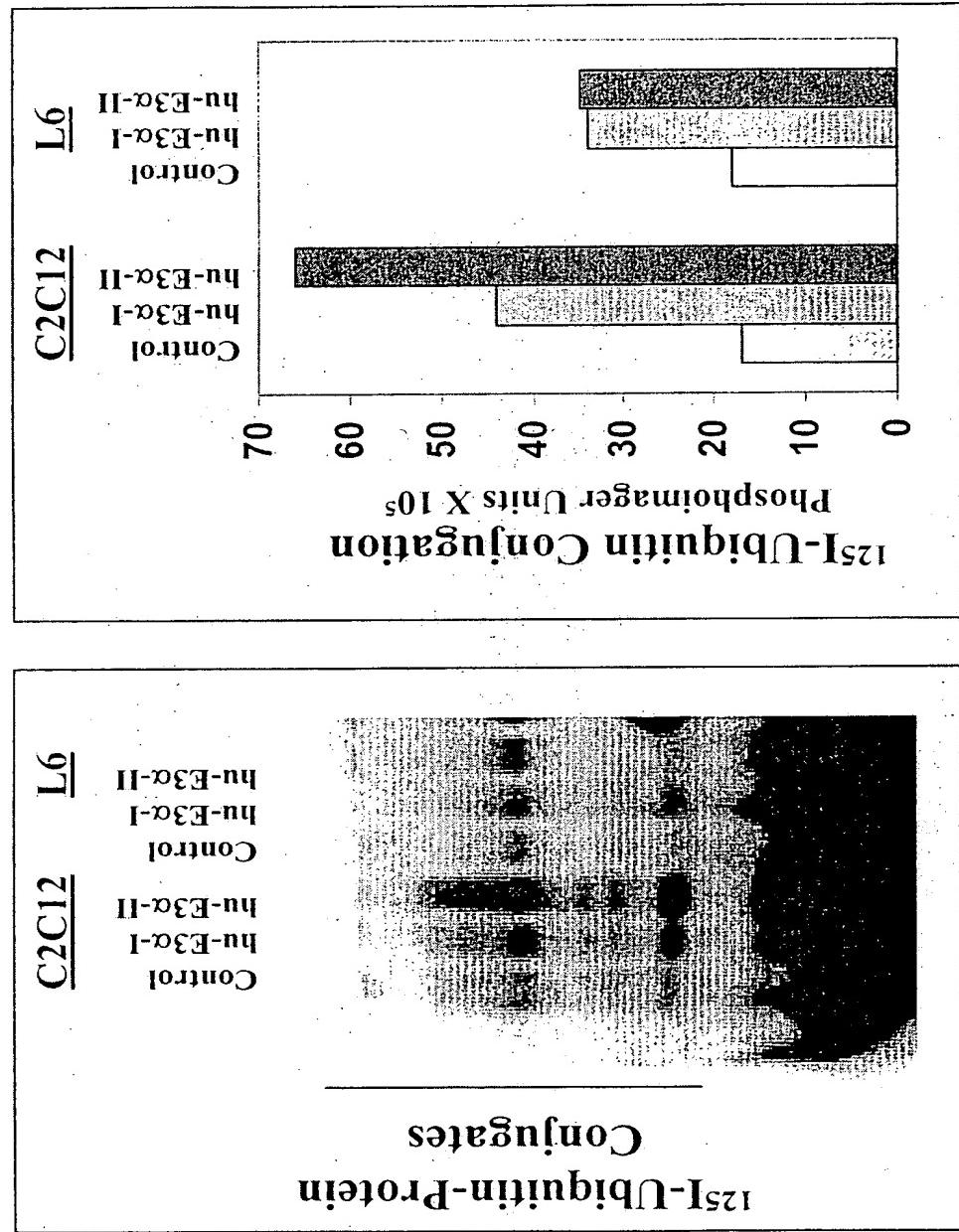




Figure 6

125I-Ubiquitin Conjugation to Muscle Proteins and Its Sensitivity to E3 α Inhibitor
in Skeletal Muscle Extracts

Control v.s. 3-day tumor-bearing

Control v.s. 5-day tumor-bearing

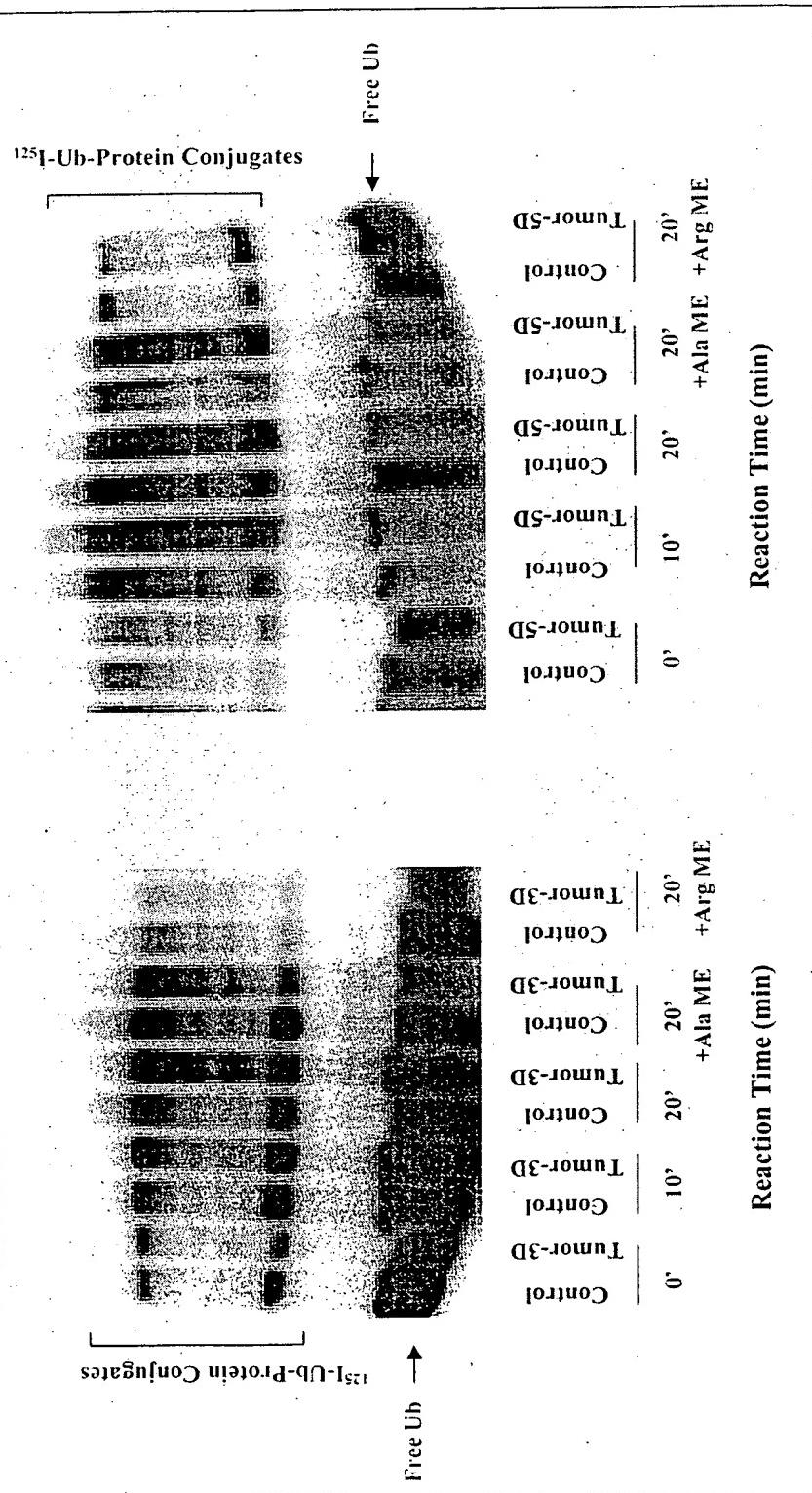




Figure 7

Rates of Ubiquitination of N-end Rule Substrate α -Lactalbumin in Skeletal Muscle Extracts

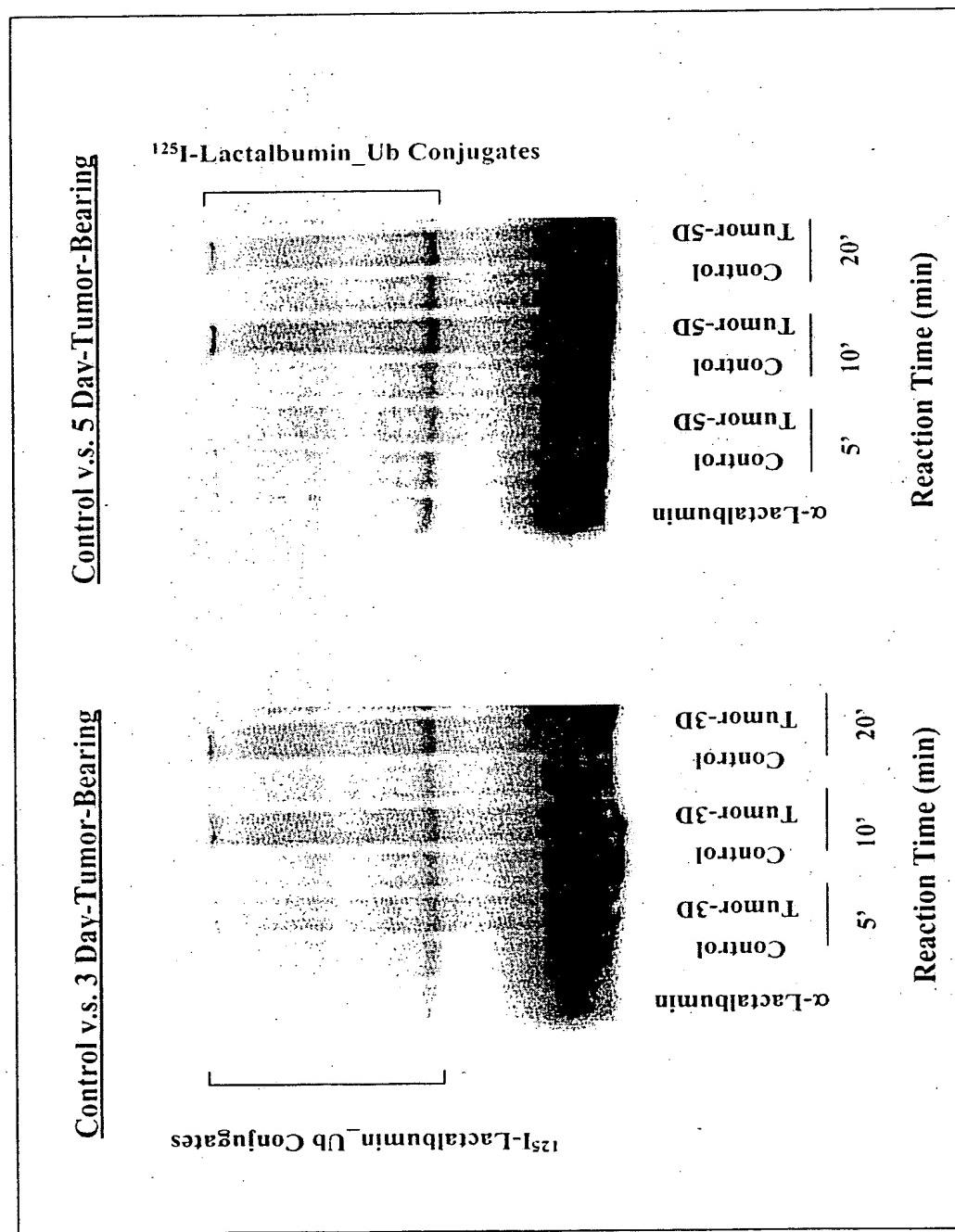




Figure 8

**Northern blot analysis of E3 α -I & E3 α -II expression
in gastrocnemius muscles in YAH-130 experimental cachexia model**

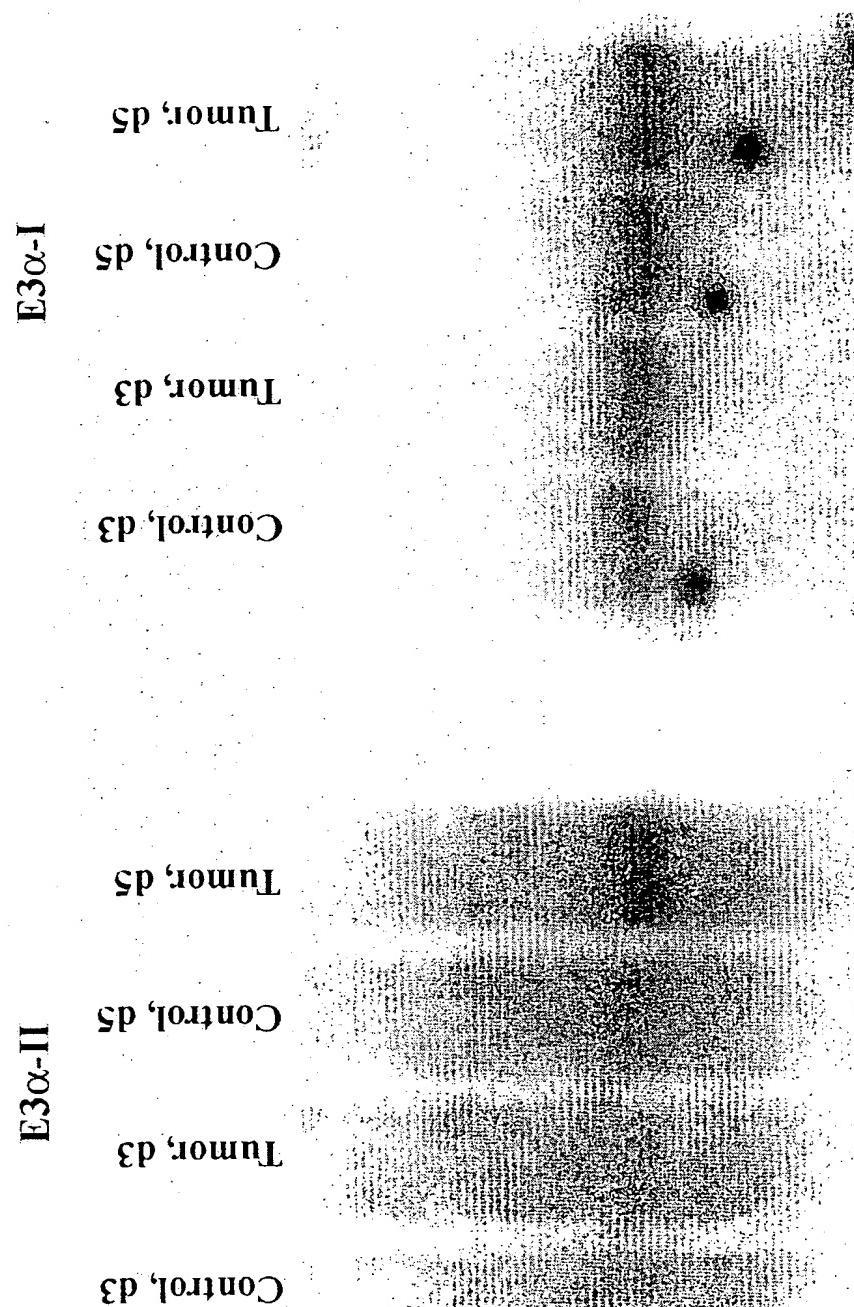




Figure 9

Northern blot analysis of E3 α -I and E3 α -II expression in gastrocnemius muscle and cardiac muscle in C26 experimental cachexia model

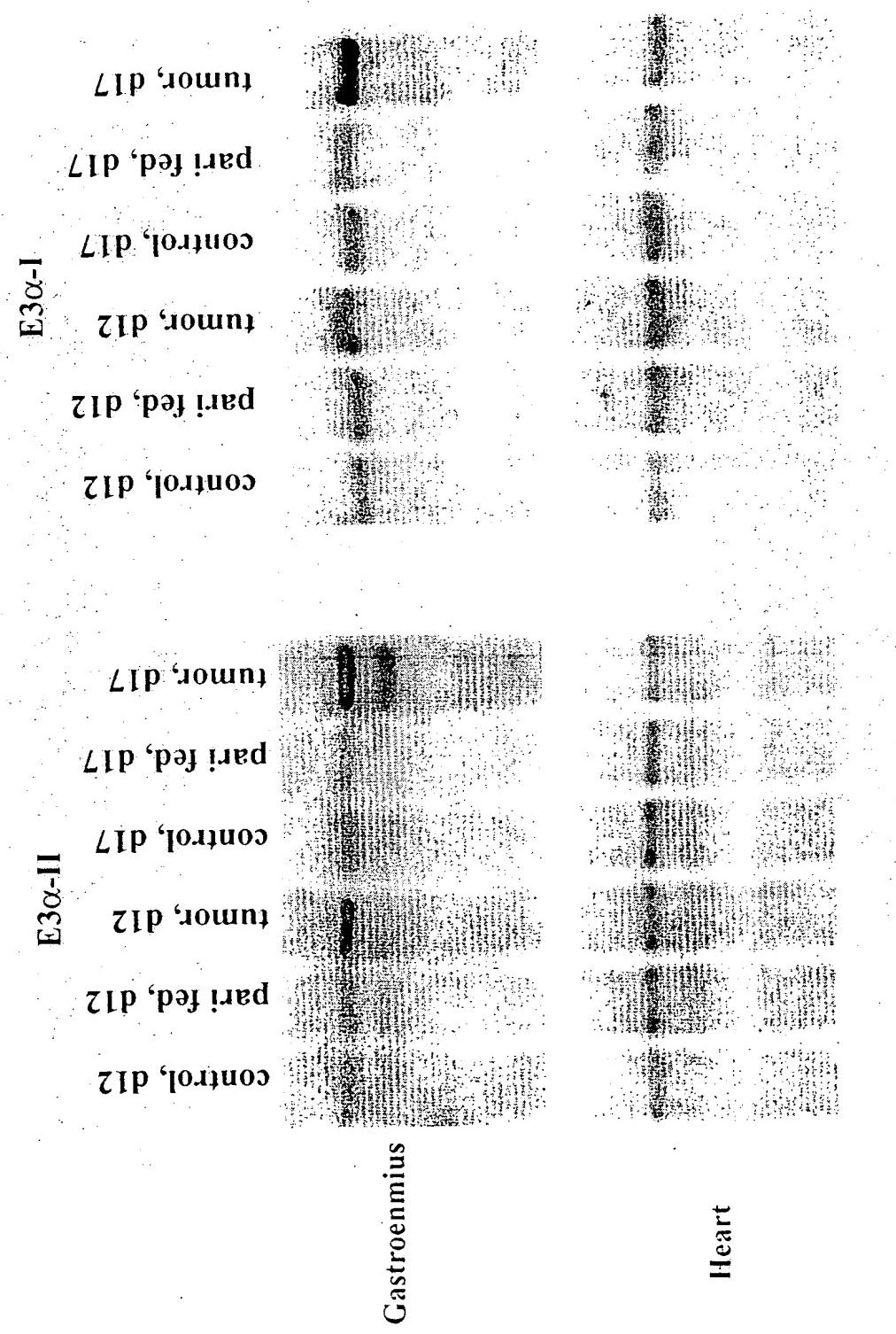




Figure 10

Proinflammatory cytokines TNF- α and IL-6 induce E3 α -II Expression in C2C12 myostube culture

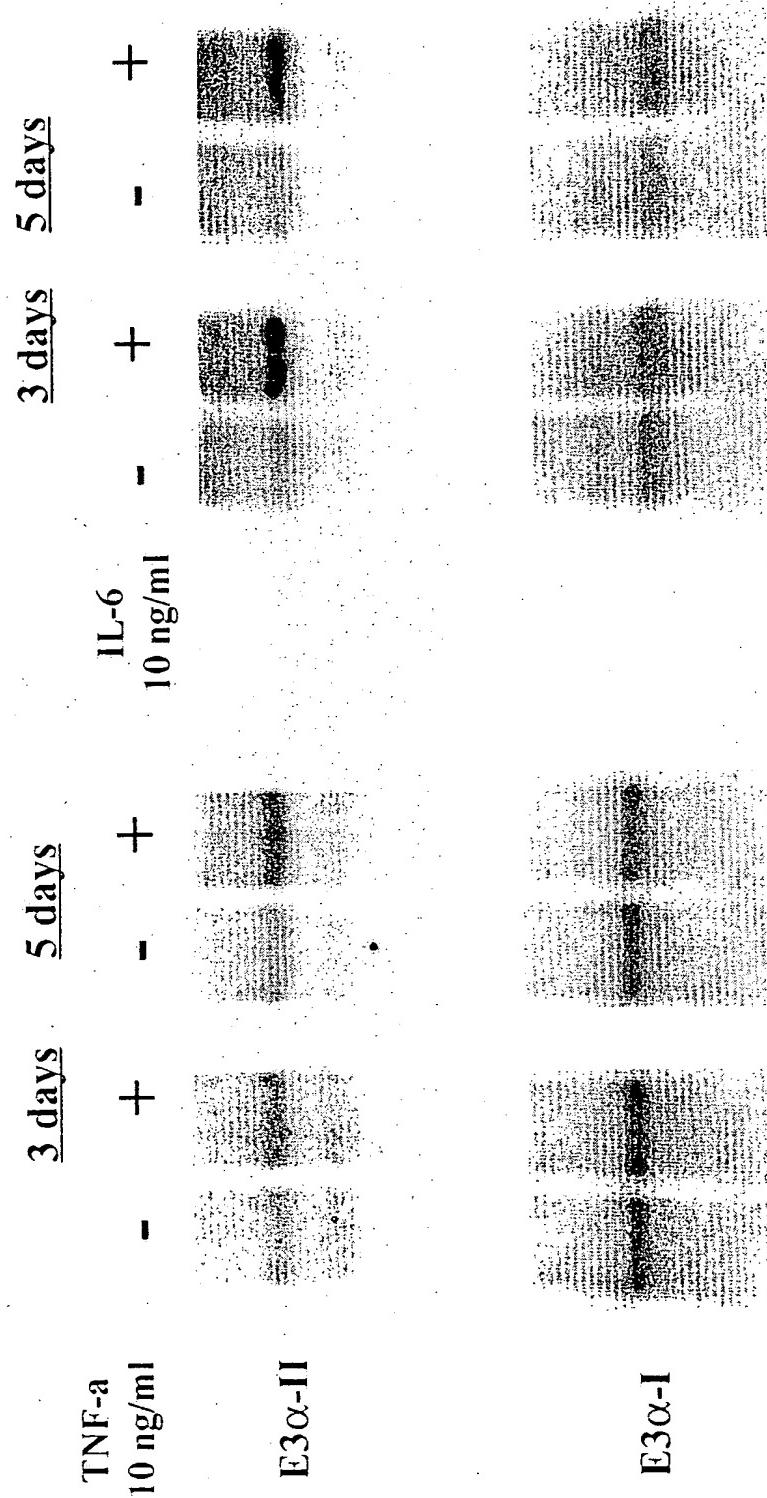




Figure 11

IL-6 Elicits Accelerated Ubiquitination in C2C12 Myotube Cultures

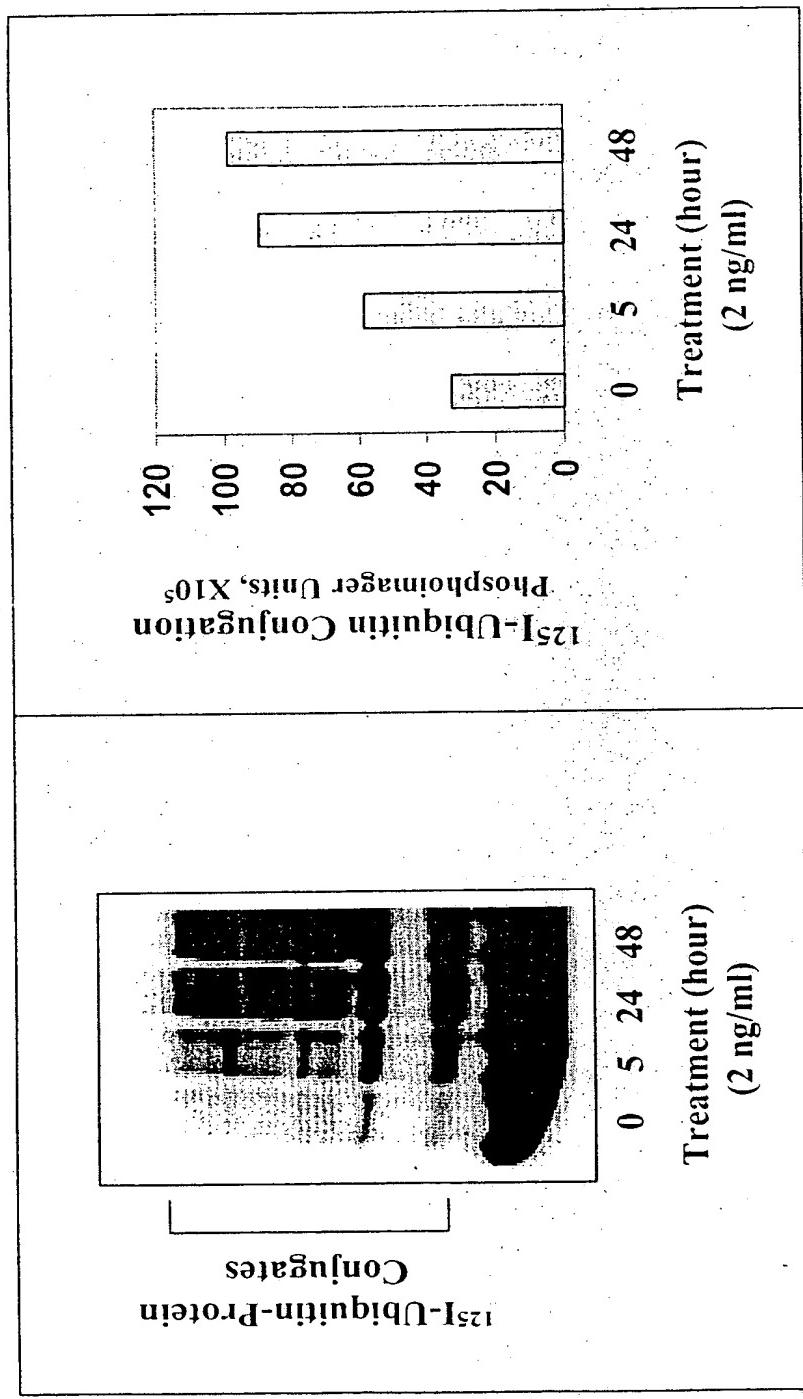




Figure 12

TNF α Elicits Accelerated Ubiquitination in C2C12 Myotube Cultures

